CRYSTAL OSCILLATOR CHIP

Patent Number: JP5129874
Publication date: 1993-05-25
Inventor(s): NAGAI MITSURU
Applicant(s): SEIKO EPSON CORP
Requested Patent: JP5129874
Application Number: JP19910291660 19911107
Priority Number(s):
IPC Classification: H03H9/19; H03H9/215
EC Classification:
Equivalents:

Abstract

PURPOSE:To improve the accuracy and the reliability by providing an insulation film at least onto a plane electrode among the plane electrode and side face electrodes being electrodes of the chip so as to prevent an external gas or dust from being adsorbed by the plane electrode of the crystal oscillation chip. CONSTITUTION:An electrode of a crystal oscillation chip 11 consists of a plane electrode 21 made of a metallic film provided onto a crystal plane and of a side face electrode 31 made of a metallic film provided onto the crystal plane. Moreover, an insulation film 41 is deposited on the plane electrode 21 to prevent adsorption of an external gas or dust. Thus, the adsorption of a gas released from a plug, a case and an adhesives being components of the crystal vibrator onto the plane electrode 21 of the crystal oscillation chip 11 is prevented, resulting that the crystal vibrator with high accuracy is obtained without a characteristic deterioration in the change in the oscillation frequency and an increase in the CI or the like.

This Page Blank (uspto)

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 05-129874

(43)Date of publication of application : 25.05.1993

(51)Int.Cl. H03H 9/19
H03H 9/215

(21)Application number : 03-291660

(22)Date of filing : 07.11.1991

(71)Applicant : SEIKO EPSON CORP

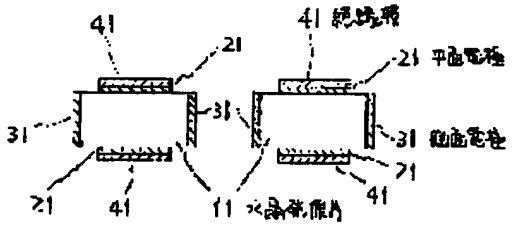
(72)Inventor : NAGAI MITSURU

(54) CRYSTAL OSCILLATOR CHIP

(57)Abstract:

PURPOSE: To improve the accuracy and the reliability by providing an insulation film at least onto a plane electrode among the plane electrode and side face electrodes being electrodes of the chip so as to prevent an external gas or dust from being adsorbed by the plane electrode of the crystal oscillation chip.

CONSTITUTION: An electrode of a crystal oscillation chip 11 consists of a plane electrode 21 made of a metallic film provided onto a crystal plane and of a side face electrode 31 made of a metallic film provided onto the crystal plane. Moreover, an insulation film 41 is deposited on the plane electrode 21 to prevent adsorption of an external gas or dust. Thus, the adsorption of a gas released from a plug, a case and an adhesives being components of the crystal vibrator onto the plane electrode 21 of the crystal oscillation chip 11 is prevented, resulting that the crystal vibrator with high accuracy is obtained without a characteristic deterioration in the change in the oscillation frequency and an increase in the CI or the like.



LEGAL STATUS

[Date of request for examination] 05.06.1997

[Date of sending the examiner's decision of 22.08.2000

rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]	withdrawal
[Date of final disposal for application]	25.11.2002
[Patent number]	
[Date of registration]	
[Number of appeal against examiner's decision of rejection]	2000-15068
[Date of requesting appeal against examiner's decision of rejection]	21.09.2000
[Date of extinction of right]	